

Fresno on July 17, and the winged Blastophagas issued from these two figs between July 21 and July 27. Their progeny formed a second generation of which the winged females issued from the figs between September 17 and September 28. The third resulting generation did not complete its transformations the same season, but had increased to the inhabitants of at least two thousand figs and thus counteracted, in no small measure, the loss caused by the issuing of the fourth generation of the Fresno Blastophagas.

Mr. Swingle stated that one reason for the incomplete and often erroneous conclusions in reference to figs reached by the botanists was that they had depended very largely upon certain entomologists for their data. He made some remarks regarding his work with figs in Italy and North Africa. In reply to the question whether there were any parasites introduced with the Blastophaga into California, Mr. Schwarz replied that, to his knowledge, none had been introduced, but that large numbers of the fig-insects were destroyed by being caught in the webs of spiders spun commonly on the fig trees. He said it was very important that other varieties of Caprifig trees be brought in. Mr. Swingle mentioned a Nematode, *Anguillula*, which, probably living as a mess-mate, was somewhat injurious to the Blastophaga in the Old World. Dr. Stiles was inclined to consider this Nematode not as harmless as supposed, and he mentioned some allied forms of this and other genera which have been found to be quite harmful.

—The following paper was sent by Prof. Uhler for publication in the PROCEEDINGS :

**SOME NEW GENERA AND SPECIES OF NORTH AMERICAN
HEMIPTERA.**

By P. R. UHLER, LL. D.

Div. MYODOCHINA.

Dycoderus, new genus.

Closely related to *Ptochiomera* Say. Head thick sub-conical, hairy and including the eyes, about as wide as the anterior lobe of the pronotum; antennæ very thick, the apical joint thicker than the others, about twice as long as the third, the second longest, thinnest, tapering towards the base, the basal joint stout, shorter than the front, subfusiform; eyes globular, placed below the line of the convex front, the front broad, tu-

midly convex in union with the vertex, cheeks short, tylus long and narrow, the rostrum slender, geniculate, reaching upon the middle coxæ, the basal joint longest, moderately thick, second almost as long, reaching upon the anterior coxæ, the third much shorter; gula swollen, the bucculæ slender, long. Pronotum sub-campanulate, deeply constricted at about two-thirds of the length posteriorly, the groove carried down continuously to the sternum, anterior lobe about twice as long as the posterior one, sub-quadrangular, a little convex, having the lateral border curved, bent down, and the edge very narrowly reflexed, posterior lobe broad, very short, with the lateral margins oblique, elevated on the posterior border, and sloping down to the sulcated line; posterior middle of the prosternum deeply excavated, and bounded behind by a callous ridge. Anterior femora stout, sub-fusiform, hardly longer than the tibiæ. Scutellum tumid next the tip. Abdomen expanding posteriorly in a curve, wider than the pronotum. Corium narrow, triangular at base, curving wider behind the middle, the membrane barely extending beyond the tergum, the apical curve oval, veins indistinct, not apparently continuous, underside of body highly polished.

D. picturatus, new sp.

Oblong subovate, piceous-black, more or less rufous beneath, covered above with grey, erect bristles, and coarsely punctate; head thick and nutant, impressed across the middle and at base, coarsely punctate in a lunate depression; antennæ rufo-testaceous, the apical joint and outer end of the third black; rostrum rufo-testaceous, darker at base and tip. Pronotum polished, the anterior margin arcuated and with one or more transverse lines of punctures behind it, the humeral angles callous, a little elevated, bounded behind by a short, grooved line. Scutellum black, deeply punctate. Hemelytra flat, dull black, finely punctate in the sutures, base with a triangular whitish spot and apex with a narrow, transverse spot of the same color, costal margin acutely reflexed; membrane convex, dusky posteriorly and with a pale border. Legs pale rufo piceous, the tibiæ testaceous, piceous at tip, tarsi mostly piceous.

The female is a little wider than the male. Length to tip of abdomen ♂ $2\frac{1}{2}$, ♀ 3 mm, width of pronotum $1\frac{1}{8}$ mm.

A pair ♂ ♀, collected near Phoenix, Arizona, belong to Mr. E. D. Ball, and another from near Denver, Colorado, is in my own collection.

Div. SAICIDA.

Orthometrops, new genus.

Long fusiform, somewhat like a narrow *Coriscus*. Head long before the eyes, subcylindric, a little nutant, decurved at tip, neck sub-annular, swollen, smooth, a little longer than the eyes, constricted behind them and at base; eyes oval-orbicular, projecting laterally; antennæ setaceous, about as long as the entire body, the basal joint nearly as long as the

head and forward lobe of the pronotum united, a little thicker than the others, third and following joints very slender, the second longest; rostrum slender, not abruptly narrowed, bent towards the prosternum, the basal joint longest, one-third longer than the second. Pronotum longer than the head, with the anterior lobe narrow, and obconical anteriorly, bounded behind by a deep stricture, the posterior lobe much wider and shorter, subtrapezoidal, high, widened posteriorly, bluntly carinate on the lateral margins and terminating in a callosity on the humeri. Scutellum triangular, acuminate at tip. Hemelytra long, oblong-ovate behind, the membrane slender on the inner border of the corium and widening towards the apical curve, the veins stout, forming a large, oblong basal cell, and running backwards and curving towards the apex. Connexivum left uncovered by the hemelytra. Venter carinate on the middle line. Legs long, the anterior femora long and thickened, the tarsi short and very slender. Throat and second joint of rostrum armed with stiff bristles.

O. decorata, new sp.

Yellowish or greenish testaceous, polished, mostly smooth; the head more or less rufous, antennæ yellow, usually dusky beyond the second joint, eyes brownish; rostrum piceous at tip. Pronotum linearly rufous on the middle of anterior lobe, posterior lobe unarmed. Scutellum more or less rufous or brownish, slenderly carinated on the lateral margins, acutely acuminate at tip. Corium thin, clouded with fuliginous beyond apex of clavus and bordered with red at tip, the clavus red next the scutellum; membrane pale brown, darker on the basal middle. Apical portion of tergum more or less dusky. Legs testaceous, with the apex of tarsi and the nails piceous.

Length to end of abdomen 5 mm. Width of base of pronotum $\frac{3}{4}$ mm.

Several specimens were collected near Bladensburg, Md., by Mr. O. Heidemann, and one from Pennsylvania, some were sent to me by Mr. Carl F. Baker. It has also been found near Madison, N. J., by Mr. F. C. Paulmier.

Fam. CIXIIDÆ.

Monorachis, new genus.

Form of a long *Issus*, but related to *Plectoderes*. Vertex short, tubular, transverse, lunately emarginate behind, sinuated to receive the eyes, the apex slightly angularly produced, *front* broad oval, emarginated to receive the clypeus, with the lateral angles acutely carried down to border the clypeus, the lateral margins prominently raised and the adjoining surface correspondingly depressed, the middle strongly carinate, *clypeus* triangular, longer than wide, narrower than the front, convexly elevated longitudinally, the outer margins carinately reflexed, *rostrum* reaching over the middle coxæ, base of antennæ globose, almost as large as the eyes. *Pronotum* very narrow, entering deeply into the notch of the

head, *mesonotum* with the middle shield triangular, about twice as long as wide, carinate on the middle and sides, bluntly triangular at the posterior end, the pleural area carinate. Legs short, stout, the anterior femora grooved and carinate beneath, tibiae flattened on the outer surface and margined with carinate lines. *Hemelytra* scarcely longer than the abdomen, bluntly rounded at tip, the veins coarse, granulated, the medial areoles few, long, narrow, the apical series composed of rather short areoles which widen apically, clavus large, long, acutely subtriangular. Abdomen short and stout.

M. sordulentus, new sp.

Dark brown, somewhat clouded with obscure fulvous. Vertex dull yellowish, indented each side of middle, brown on the posterior suture, front soiled yellowish, a little obscured with brown on the lateral margins, clypeus same color, but soiled brownish each side of tylus, rostrum and eyes brown. Dorsal shield of mesonotum pale brownish, with the carinate lines coarse and pale yellow. Pectoral pieces pale brown, more or less spread with yellowish. Coxae soiled yellowish, the legs brown, tibiae, apex of femora and portions of the tarsi, pale fulvous. Hemelytra dull fulvous, crossed by irregular bands of brown ragged spots, the coarse vein of inner margin and veins between the spots pale fulvous or testaceous. Abdomen brown, paler beneath, the connexivum interrupted with pale fulvous spots.

Length to end of abdomen $3\frac{1}{4}$ mm. Width across base of hemelytra $1\frac{1}{2}$ mm.

One specimen, a female, was collected near Lake Worth, Fla., by Mrs Annie Trumbull Slosson. I have also examined fragments of a specimen of the same species from the Indian river region.

Cyphoceratops, new genus.

Remarkable for having the lamellae of the vertex carried up divaricating and curving back, expanded like ears to the posterior line of the eyes; front very long, gradually narrowing above, widening below and forming a long oval figure with the clypeus, the middle line defined by a continuous thick carina, lateral margins slenderly carinate, and continued on the clypeus; eyes large and prominent, longer than the height of the auriculate lamellae; basal joint of antennae subfusiform, shorter than the second, which is stout and knob-like; rostrum short, thick, and wide, not extending behind the anterior coxae. Pronotum very short, a little triangular on the middle and bluntly carinate; mesonotum triangular, a little wider than long; scutellum small, longer than wide. Hemelytra long, suboval, about three times as long as wide, the base a little curved and the apex of membrane obliquely curved, basal series of areoles long, narrow, simple, the vein next outside the inner areole forked at tip, the costal areole longer than the next of the series, and these terminating on the same

transverse line, six ante-apical areoles, the three middle ones being much longer than the others. the central one long wedge-shaped and with a triangular tip; apical series composed of twelve narrow cells, and a small one next the costal tip. Eight apical areoles to the wings, the third one of which, from the outer margin, is curved-triangular. Posterior tibiæ long, prismatic, carinate-edged, armed with three small teeth and with a stout, long spur at tip. The pleural breast pieces beneath the pronotum are as long as from pronotum to suture of base of clypeus, are wider diagonally and angular at base and become rounded (*i. e.*, suboval) at tip, and are bright green with an orange stripe throughout the length of the middle line. There are four long areoles (including the costal), to the base and middle of corium, and with a triangular cell inserted at tip between the third and inner areoles.

C. furcatus, new sp.

Moderately robust, greenish testaceous, the face and ante-pectus bright green, striped with orange, tip of rostrum black; pro- and mesonotum pale green, dusky each side, and with dark marks exteriorly. Pleural segments either with a black dot or irregular mark. Hemelytra hyaline, tinged with green, the veins dark brown. Tergum greenish white at base, with a blackish cloud on the middle; venter pale green, the segments marked with black bands. Legs green, with the spines and tips of tarsi piceous.

Length to end of abdomen, $3\frac{1}{4}$ mm. To tip of hemelytra, 6 mm. Width across base of hemelytra, $2\frac{3}{4}$ mm.

Found in Cuba; one specimen from E. D. Ball, Port au Prince.

Cotyleceps Uhler.

C. procellata, new sp.

Pale brownish gray, moderately robust, wing-covers straight on the upper margin and curving moderately on the costal border, widening a little posteriorly, and the membrane slightly valvate, wider, bluntly curved. Vertex short, subquadrangular, wider than long, with the marginal carinæ less elevated than normal, the color pale orange and continuous with the same color, forming a broad vitta on the middle line of the entire notum, the carinate lines white, front paler, deeply sunken throughout each side of the prominent middle carina, carinate folioles of the margins prominent and strongly curved; rostrum slender, piceous at tip. Pronotum very short, sublunate, narrowing to a mere border behind the eyes. Mesonotum dark brown on the lower sides, the dorsal shield about twice as long as wide, triangularly rounded at base, acutely triangular and pale yellow at tip, the middle line and lateral margins carinate pale yellow, straight. Hemelytra almost opaque, a little dusky, minutely granulated, the inner border broadly and the apical margin narrowly pale, costal margin with three or four short brown transverse spots, the veins brown and crossed behind the middle by three wavy oblique bands of

brown spots, and near the apex with clusters of brown spots arranged in curves, more dense at the upper outer angle, before the middle more faintly marked with brown streaks and dots. Two of the middle apical areoles long triangular, most of the others subquadrangular. Abdomen wide. Femora and tibiæ dull testaceous, clouded with brown, the tarsi banded with brown, the nails piceous. ♀.

Length to tip of abdomen 4 mm. To apex of closed wing-covers $5\frac{1}{2}$ mm. Width of mesonotum $1\frac{1}{2}$ mm.

One female from Hayti, and another is in the collection of Mr. E. D. Ball, obtained near Port au Prince in February.

Div. DICTYOPHORIDA.

Tangyria, new genus.

Head semicircular, blunt edged above, the vertex depressed in the middle and marked there with a triangular carinate line, front about one and a half times as long as wide, obliquely widening towards the clypeus, the middle line bluntly carinated and the carina interrupted at the clypeus, the clypeus subequilaterally triangular, not carinate. Pronotum acutely lunate, set deeply into the head, notched at base, having a blunt carina which is continued back to the scutellum, shield of the mesonotum longer than wide, triangularly rounded in front, the lateral, bounding carinæ curving and divaricating posteriorly. Pleural piece behind the eye longer than wide, bounded by straight carinæ, sulcate, produced in a point behind. Hemelytra supplied with numerous straight veins, the costal area narrow, caused by numerous oblique veins, membrane with about thirteen series of eight elongated cells, bounded by black cross-veins. Posterior tibiæ carinate on the edges, provided with two spines near the middle.

T. frontalis, new sp.

Bright pea green, polished, moderately robust, vertex a little wider than long, the border next the front marked with six black spots, those next the eyes being linear, all placed on a yellow band. Carinate lines of head and notum whitish. Hemelytra moderately long, nearly parallel-sided, the costal margin very slightly curved, membrane about one-third the length of the corium, almost straight across the base, the outer angle acutely produced, cross-veins black, slender, inner angle of apex very slightly rounded. Spines of tibiæ and tarsi, and the nails black.

Length to end of abdomen 5 mm. To tip of hemelytra 8 mm. Width of mesonotum $2\frac{1}{4}$ mm.

One specimen (♀) from Port au Prince, Hayti, December, is in the collection of Mr. Elmer D. Ball.

Tangiopsis, new genus.

♂ Form similar to *Tungia*; the vertex short, almost flat, a little wider than long, curved on the anterior margin, the entire margin carinately raised, and the middle line bluntly carinated; front about one-half longer

than wide, almost truncated at the summit, the sides curving wider towards the clypeus which completes the curve and tapers to the tip, the margins slenderly elevated and the middle line with a blunt carina, which continues on to the rostrum, the clypeus less than one-half the length of the front, cheeks narrow and long. Pronotum short, almost crescent-shaped, with the central shield triangular, bounded by raised lines and let into the base of the head; mesonotum about twice as long as the preceding, with the dorsal shield bluntly triangular, bounded by raised lines, and having a middle carina. Propleura wide, almost triangular, with a large hole near the middle, segments behind this each with a black, depressed spot. Scutellum very small. Hemelytra not long, bluntly curved, almost transparent, all the nervures set with raised granules, and the intervals with rows of raised points. Costal areole wide, but a little shorter than the others of this series, the three innermost about equal in length, the interpolated one long cuneiform, the ante-apical series short, six in number, the one on either side very short, apical series moderately short, narrow, the exterior ones on both borders curved, twelve in number. Posterior femora with two spines behind the middle. Ocellus on middle of front.

T. tetrastichus, new sp.

Pale green, the face deep green with the middle carina orange, the lateral margins of entire head more or less yellow, occiput with two black spots, diagonal lines of the mesonotal shield orange. Veins of hemelytra stout, sometimes a little dusky, spaces between the veins granulate in lines, transverse veins of membrane and wings and a sub-apical series of spots dark brown. Spines and nails of feet piceous. Pleural pieces with a black dot in middle of first three. Length to apex of abdomen 3 mm. Length to tip of wing covers $4\frac{1}{2}$ mm. Width of hemelytra 2 mm.

A male and female from Port au Prince, Hayti, are in the collection of Mr. E. D. Ball. December.

Div. FLATIDA.

Dascalìa, Stal.

D. guttata, new sp.

Pale greenish testaceous, pruinose, marked with four black spots on the posterior curve of the pronotum, with an oblique series of three, and one exterior, before the middle of the corium, with a sprinkled series near the inner border, with numerous points of the same color remotely distributed between the middle and costal area, and with a geminate series of specks on the costal margin which is continued near the outer margin of the apex of membrane, a zigzag curved band of the same color also a little further inwards. Vertex short, subtriangular, uneven, with two transverse series of black points; front almost flat, not much longer than wide,

with the summit prominent, truncated and rectangular below, the lateral margins barely sinuated, clypeus longer, acutely triangular. Pronotum forming a subcrescentic collar entering the head and curving around the front of the mesonotum, two indented black points on the middle, and others exterior to these; mesonotum sub-semicircular, broad triangular apically, raised above the level of the head, feebly convex, stained on the forward border, with a large black spot at each outer angle and with two dots on the middle and two at base; middle of scutellar portion also with a black dot. Hemelytra ample, obliquely decumbent, marked as above recorded, the costal field wide, rounded and expanded near the base, the diagonal veins numerous, longitudinal veins of the membrane sometimes dusky. Beneath and legs pale testaceous, or white with a tinge of green. Length to tip of wing covers 9 mm. To end of abdomen $6\frac{1}{2}$ mm. Width of pronotum 3 mm.

One specimen from Port au Prince, Hayti, December, in the collection of Mr. E. D. Ball; another from Cuba in my own collection.

D. acuta, new sp.

Pale dull testaceous with a tinge of gray or olive, robust, with ample hemelytra. Head bluntly triangular, hardly longer than the pronotum, with the lateral margins of the vertex oblique, a little curved and followed inwards by a deep, long depression; front polished, longer than wide, curving a little narrower below, the margins strongly reflexed and bounded inwards by a groove, the summit made prominent by a rounded dark callosity, clypeus longer than wide, acutely narrowing, obsolete carinated on the middle. Pronotum crescentic, strongly arcuated, the narrowing sides curved back beyond the limit of the eye, indented each side of the middle; mesonotum prominently raised, the dorsal shield oval, nearly twice as long as wide, carinated on the margins and middle line, the sides exterior to the shield convexly declining. Hemelytra wide, steeply declining, bluntly rounded, the costal area broad, with the humeral end prominent, and with two series of black dots, the cross-veins coarse, brownish, distinct, mostly simple, somewhat reticulate at base on the basal portion; disk with two approximate, brown, dagger-shaped marks, the surface with remote, small, black dots. Cuneus with rows of punctures at base, and acute granules toward the tip. Veins of membrane brown, submargin of the apical areoles with a series of brown dots. Wings pale testaceous, with the veins whitish. Legs dull pale testaceous, with the tarsi more or less dusky, and the nails brownish. Venter yellowish white, pulverulent, last segment narrowly bordered each side with black. The hemelytra are sometimes spotted with brown at intervals on the costal area and disk, and a series of interrupted brown lines is conspicuous next the inner margin of the cuneus, while the veins are variable in the extent of embrownment. Two pale brownish spots are sometimes present on each

side of the mesonotum, and brown specks appear on the side of the cheeks before the eye.

Length to end of abdomen $7-7\frac{1}{2}$ mm. To tip of hemelytra 10-11 mm. Width of mesonotum $2\frac{1}{2}$ mm.

This may be a form of *Elidiptera punctifera* Walk., Brit. Mus. Cat. Homopt. Suppl., p. 71 or his *E. punctata* ib. Vol. I, p. 332, but the descriptions do not fit any of the specimens that I have examined.

Common on small logwood trees in San Domingo and Hayti, in February, March, April, May; also found in Cuba and Florida.

Ormenis, Stal.

O. robusta, new sp.

Short and stout, plumbeous, clouded with black. Vertex very short, depressed across the middle, truncated at the anterior margin, front nearly twice as long as wide, carinated each side, with a groove between the lines and the outer covered margin, the middle and outer margin obscured with blackish, with the apex broadly pale, clypeus long, acutely triangular, pale, carinated on the middle line. Pronotum sublunate, turned up at tip, widely entering and overlapping the vertex, pale brownish, transversely indented before the apex, the sides narrow, carried down, sunken under the eyes and with the edge reflexed, mesonotum broadly sublunate, elevated on the forward portion, carinated on the middle line, dark brown on the sides outside the lateral carinæ of dorsal shield, scutellum acutely triangular, elevated, with the margins prominently carinated. Hemelytra broad, pale dull yellowish, the humeral costal angle broad, ovals rounded, inner field of the cuneus ribbed and coarsely granulate in diagonal rows, veins mostly black, coarse, those next the membrane partly reticulate, thinner, areoles of the disk mostly quadrangular, membrane a little widened next the tip, the apical border sinuated, carrying a row of pale dots, with the upper angle broadly rounded and the lower angle less rounded. Tibiæ obsolete clouded with fuliginous, tarsi dark. Underside of body testaceous, covered with white bloom.

Length to end of abdomen $4\frac{1}{2}$ mm. To apex of hemelytra $6\frac{1}{2}$ mm. Width of mesonotum 2 mm.

I have examined two females belonging to the collection of Mr. E. D. Ball, from Port au Prince, Haiti, February, and others were secured near Samana Bay, San Domingo.